Based on the exploration status and the amount of data accumulated to date, other than True North, of the FGMI prospects enumerated earlier only development of the Ryan Lode prospect can be considered likely at this time. Because development of satellite prospects likely would occur sequentially, however, impacts from this prospect would be representative of those for other projects. The aspect of these projects' development that could cause cumulative impacts to the residential community in the vicinity of the Fort Knox Mill would be truck traffic hauling ore from the mine to the mill. A reasonable, but hypothetical, ore-hauling scenario for development of the Ryan Lode prospect is as follows:

- Approximately 2.4 million tons of ore hauled over a 2.7-year period, or 900,000 tons per year
- Approximately 10 to 12 end dump trucks hauling ore 21 hour per day, 355 days per year (holidays excluded)
- Average of 2,500 tons of ore hauled in a 21-hour period
- Approximately 30 tons of ore hauled per truck
- Approximately 83 round trips per day
- Haul distance of approximately 40 miles from stockpile to mill one way
- 1 truck would pass a given point, in one direction or the other, approximately every 7.6 minutes

This traffic frequency of one truck passing a given point every 7.6 minutes would compare to a truck as frequent as every 3.75 minutes that could occur from development of the True North project. Trucks from Ryan Lode would turn east off the Steese Highway onto the new True North haul road below Cleary Summit.

The Highway Capacity Manual, Special Report 209 (Transportation Research Board, 1994) lists the maximum allowable service flow rate (capacity) under ideal conditions for a two-lane highway as 2,800 passenger cars per hour. To arrive at a realistic capacity for the specific stretch of the Steese Highway between Fox and Cleary Summit, factors such as average terrain, geometric, and traffic conditions (e.g., vehicle composition, no passing zones, directional traffic distribution, and lane and shoulder width) must be accounted for. Using the "General Terrain Methodology," from the Highway Capacity Manual, CH_2M Hill (2000) calculated two adjusted capacity values for this stretch of highway. The first, using the most conservative estimates for terrain and geometric conditions, yielded a capacity of 4,969 vehicles per day. The second, using more realistic estimates, yielded a capacity of 9,758 vehicles per day. The capacity volumes were determined in terms of maximum average annual daily traffic (AADT).

The actual annual average daily traffic (AADT) volumes for the five-year period from 1995 to 1999 for the stretch of the Steese Highway between Fox and Cleary Summit are shown in Table 3.

Based on the maximum capacity calculations above, and the AADT values in Table 3, the 1999 AADT for this stretch of the Steese Highway was between 13 and 26 percent

of the highway's capacity. The daily traffic increase of 166 vehicles that would be attributable to development of the Ryan Lode prospect would increase the 1999 AADT to 1,460 vehicles, an average daily traffic increase of 13 percent. This would increase the 1999 annual traffic volume to between 15 and 29 percent of the highway's capacity, depending on which adjusted capacity value is used. This would leave between 71 and 85 percent of the Steese Highway's traffic capacity between Fox and Cleary Summit unused.

Table 3.

Recorded annual average daily traffic (AADT) values for the Steese Highway between Fox and Cleary Summit.

Year	AADT
1995	1,710
1996	1,704
1997	1,328
1998	1,266
1999	1,294

Source: ADOT&PF (2000)

While this increase in traffic would be small, regular users of the highway likely would be aware of it and it might extend their travel times. Within the context of the highway's traffic capacity, however, the impacts would be minor. Thus, development of the Ryan Lode prospect would not cause a significant increase in traffic on the Steese Highway, nor would it use a significant portion of the highway's remaining capacity. It would, however, extend by at least 2.7 years the period during which trucks would haul ore to the Fort Knox Mill.

Because they are under exploration, the viability of the Gil, Westridge/Steamboat, and Amanita prospects is still undetermined; however, they arguably could be considered foreseeable projects. The locations of the Gil and Amanita prospects (Fig. 1) are such that the ore hauling routes to the Fort Knox Mill would not use the Steese Highway. The routes would use a combination of existing mining roads and new routes that would head more directly to the mill and not approach Cleary Summit.

Development of the Westridge/Steamboat prospect, approximately 1.5 miles southwest of Pedro dome, would require ore trucks to at least cross the Steese, and perhaps to use a portion of that highway before turning east off the highway to the Fort Knox Mill. Because of the probable sequential nature of development of satellite mines, the number of ore trucks using the Steese Highway likely would not be additive to another project such as Ryan Lode, but rather would increase the length of time ore would be hauled to the Fort Knox Mill from the vicinity of the Steese Highway. As discussed above, this could last for the 11-year remaining capacity of the Fort Knox tailings impoundment, and perhaps longer if the impoundment's capacity were increased.